M/015/041

February 7, 1999



Response to 12/9/98 Rev Fees

Mr. Tony Gallegos
Utah Division of Oil, Gas Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Draft of Amendment to Notice of Intention to Commence Large Mining Operations, Diamond K Gypsum, Inc. DKG Quarry M/015/041 (UTU-69860), Emery County, Utah

Dear Mr. Gallegos:

Enclosed is a revised draft of the DK proposed operation 1999 - forward 5 to 10 years.

Please review this document and recommend changes. Return copy of draft with suggestions.

Sincerely,

John E. Welsh

John E. Welsh, Sr.
4780 Bonair Street
Salt Lake City, UT 84117-5319
801-278-6657

CC: Dean Nyffeler, Price BLM (UTU 69869) 435-636-3639
Philip Palmer, Richfield DK P.O. Box 35, 1-800-GYPSUM-1

m/015/041



# GYPSUM RESOURCE QUARRY OPERATION
Sec. 29, T.22S., R.9E.
San Rafael Resource Area
Emery County, Utah

## DIAMOND K GYPSUM INC.
5 to 10 Year Plan
1999 - 2010

Amendment to Notice of Intention to Commence Large Mining Operations,
Diamond K Gypsum, Inc., DKG Quarry, M/015/041 (UTU-69860), Emery County, Utah

1999 NOTICE OF INTENTION TO COMMENCE
LARGE MINING OPERATION, DIAMOND K GYPSUM, INC.
DKG Quarry, M/015/041 (UTU 69860)
T.22S., R.9E. Emery County, Utah

GENERAL INFORMATION(Rule 647-4-104)

1. Operator/Applicant: Phillip and Karen Palmer dba
2. Company/Corporation: Diamond K Gypsum, Inc.
3. Address: 1660 So. Red Hills Drive,
   P.O. Box 35
   Richfield, Utah 84701
4. Telephone: (435) 896-8870
5. Name/Project: Diamond K Quarry
6. Assigned File Number: M/015/041 (UTU 69860)
7. Location of Proposed Activities:
   County: Emery
   Township: 22S., 9E.
   Section(s): NE/4, NW/4, SE/4, SW/4 of SW/4 Sec. 29
   NE/4, SE/4 of SE/4 of Sec. 30
   N/2, NW/4 of NW/4 of Sec. 32

8. Ownership of Land Surface:
   Public Domain (BLM)
9. Ownership of Minerals:
   John Elliott Welsh, Sr., LLC
   John Elliott Welsh, Sr., Agent

10. Utah Mining Claim Number(s)

| | |
|---|---|
| B and J No. 2 | #212727 |
| B and J No. 5 | #212729 |
| B and J No. 6 | #226190 |
| B and J No. 9 | #212732 |
| B and J No. 10 | #226191 |
| South Salt Wash No. 1 | #365869 |
| South Salt Wash No. 2 | #365870 |

R647-4-105 - Maps, Drawings & Photographs

105.2 The 1:6,000 scale topographic map shows the BJ Nos. 5, 6, 9, 10 and SSW Nos. 1, 2 unpatented placer mining claims which are or may be involved in the Diamond K Gypsum quarrying operations of gypsum rock from 1999, continuing for several years.

The 1:2880 scale map, an overlay of an aerial photo, shows:

1) The aerial perimeter of the approximately 20 acre gypsum rock resource in Area C.
2) Previously quarried Area B, now recontoured and reclaimed.
3) The active 1999 Haul road from quarry to Moore Road with culverted turnaround across South Salt Wash.
4) Subdivision of the resource into 1 acre lots Nos. 1 to 32. The probable quarrying sequence of lot Nos. is indicated.
5) The maximum total disturbance for all of Area C is 30 acres.
6) The initial quarry, now operating, in Area C is in Lots Nos. 1, 2, 5, 6. topsoil and overburden stockpiles are indicated.

105.3 Six photos are submitted which show the 1998 unmodified South Salt Wash drainage and the 1999 culverted South Salt Wash crossing; mine Haul Road of 750 linear feet from El. 6530 to 6580, 6.7% gradient, to the Emery County Moore Road; Area C before quarrying and after initial quarry showing haul turnaround loop across South Salt Wash.

Two 4 foot diameter culverts, placed in the South Salt Wash channel are adequate to handle "10 year flash flood runoff events." The turnaround loop of 5 feet of fill is above the maximum level of the floodplain of South Salt Wash.

R647-4-106 - Operation Plan

106.2 A D-9 cat dozer is used to strip off overburden from the gypsum-rock. "Topsoil" zones B and C, one to two feet thick are initially removed and stockpiled separately. Overburden rock is secondarily removed, stockpiled separately. these 1999 stockpiles are noted on 1:2880 scale map.

Gypsum rock is quarried with a modified RR250 cat reclaimer. A 950 cat loader collects and places the fragmented gypsum rock into a stockpile at the edge or within the quarry for loading and haulage off of the property.

The total acreage of the gypsum-rock is approximately 20 acres. The "topsoil" zones B and C average less than 1 foot thick. There is no organic soil Zone A. Overburden to high purity gypsum rock varies from 2 to 15 feet. There is one plus 10 foot overburden area in lots 7, 10, 11, 12, 19, 20.

Topsoil, overburden, and ore stockpiles, and mine roads are to be confined within the resource boundary. Backfilling, recontouring, topsoil replacement is progressive and concurrent with quarrying.

105.2

PROPOSED SEQUENCE OF MINING AREA C
by
DK GYPSUM in SW/4 sec. 29, T.22S., R. 9E.
Emery County, Utah

QUARRYING:

1) 1999 present existing operating quarry in acre lots 1, 2, 5, 6
2) Next quarry acre lots 8, 9, 10, 17, 18, 19
3) Next quarry acre lots 24, 25, 26, 29, 30
4) Next quarry acre lots 20, 27, 28, 31, 32
5) Next quarry acre lots 7, 11, 12, 13
6) Next quarry acre lots 14, 15, 16, 22, 23

TOTAL APPROXIMATE GYPSUM-ROCK ACREAGE 20
MAXIMUM DISTURBED AREA ACREAGE 30

=?

ACCESS ROAD FROM MOORE ROAD ACROSS SOUTH SALT WASH

1) Constructed road, turn around, loading 750 linear feet
2) Area 500 x 15 + 250 x 30 + 15,000 sq. ft. + 0.35 acres
3) Gradient El. 6580 to 6530 = 6.7%

(500 x 15) + (250 x 30) = 15,000 FT²
= 0.344 ACRES

1999 Existing Quarry

Total acres disturbed 3 1/2 to 4 acres
Topsoil stockpile 1/2 acre
Overburden stockpile 1/2 acre

105.3

# PHOTOGRAPHS
# 1999 DK GYPSUM AREA C OPERATIONS
JANUARY 1999

## SOUTH SALT WASH DRAINAGE

Photo 1 — SW/4, NW/4, SW/4 sec. 29, T.22S., R. 9E.
South Salt Wash Drainage with I-70 foreign bedload from 1990 cloudburst. Flora is a complete change from original pre-1990 flora. View East.

Photo 2 — SE/4, NW/4, SW/4 sec. 29, T.22S., R. 9 E.
South Salt Wash Drainage with DK culvert and rip rap. Flora after 1990 I-70 cloudburst. View East.

Photo 3 — SE/4, NW/4, SW/4 Sec 29, T.22S., R. 9E.
South Salt Wash Drainage crossing, loop in Haul Road. DK culvert. View West

## HAUL ROAD TO MOORE ROAD

Photo 4 — SE/4, NW/4, SW/4 sec. 29 T.22S., R. 9 E.
750 feet in length from El. 6530 to 6580 to 6600 at Moore Road. Gradient approximately 6.7%. View North

## QUARRY AREA C ACROSS (SOUTH) OF SOUTH SALT WASH

Photo 5 — Center SW/4 sec. 29, T.22S., R. 9E.
Structure/stratigraphic terrace on gypsum rock member of Carmel Formation. Dipping 6.5 % Northwest from El. 6640 to El. 6560. View South.

Photo 6 — Quarry January 1999 in C, SW/4 sec. 29, T.22S., R. 9E.
Across Haul Road with turn around at South Salt Wash. Reclaimed, recontoured Area B in middleground. Gypsum Rock exposed, quarried and loaded in background. Operator Phillip Palmer, President Diamond K Gypsum. View Southeast.

Photos Taken Jan 1999

106.3 Gypsum rock resource is approximately 20 acres. Maximum surface disturbance to mine Area C, is 30 acres. Aerial mining sequence is proposed in six areas defined by acre lots. This plan covers a minimum 10 year operation.

106.5 - Soil types, location, amount:
Within Area C, the principal soil is 1-2 foot flocculated gypsum. Some of the gypsiferous soils are cryptogamic with lichen growth, but most are barren. In the gullies the outcrops are weathered gypsum without soils. Overburden is siltstone, and the lower slopes below the gypsum bed is siltstone. These siltstone areas have more colluvium of silt and clay and the soils though thin (1) one foot have more vegetation.

The upper (1) foot of the soil over each acre is stockpiled separately from the overburden stripping. This method saves the native seed bank. The barren overburden varies in thickness from 0-4 feet. Usually 2-3 feet of weathered gypsum needs to be removed before quarrying the gypsum resource. The volume of stockpiled soil is approximated at 40,000 cubic/feet/acre. The soil development is minimal, but mixing gypsiferous arid silty clay soils with gypsiferous soil in reclamation will enhance plant recovery.

106.6 Protecting, Repositioning Soils:
Segregation of the upper 1 foot of stripping from overburden is important to preserve the residual seed bank. This material will be spread evenly across the reclaimed areas.
Soil stockpiles are stored adjacent to the active quarry, then redistributed after the mined out quarry is first covered by stockpiled overburden. Protecting and redepositing salvaged soils requires no specific procedures, because storage is outside cloudburst threat.

106.7 Existing Vegetation
The plant frequency on gypsiferous soils may range from one plant/square foot to less than on plant/square yard. Lepidium montanum may have a uniform distribution of one plant/square foot. Atriplex confertifolia may have an irregular distribution and occur less than one plant/square yard. Much of the gypsiferous soil on south facing slopes is barren.

Indigenous Plant Species Chart No. 1

106.8 Groundwater is 500 feet or greater below the surface. There are no aquifers above the Page/Navajo sandstones.
Overburden above the gypsum resource is mapped on Area C. This overburden is siltstone.
Geology: Frank Royse Jr., Detachment fold train, Reed Wash area, west flank of San Rafael Swell, Utah: The Mountain Geologist, Vol. 33, No. 2 (April 1996), p. 45-64.

106.9 Resource: The gypsum resource is conservatively estimated at 2,000 tons/acre foot with a maximum quarried thickness of 10 feet of gypsum rock. Approximately 20 acres have recoverable gypsum resource. The entire proposed disturbed area may reach 30 acres. Overburden of siltstones above the gypsum rock is approximately 3 acres. feet Average overburden of weathered and impure gypsum rock above the resource is estimated at 3 to 4 feet thick. Overburden and topsoil will be replaced as the quarrying proceeds, keeping the maximum unreclaimed acreage less than 5 acres.

R647-4-107 Operation Practices

107.2 The crossing of South Salt Wash drainage has been constructed with culverts to carry off the seasonal rainfall, snow melt and the occasional flash flood runoffs. there has been only one (1) cloudburst flood in the South Salt Wash drainage occurring in 1990, which would possibly wash away the constructed road crossing. The maintenance on crossing and culverts will be done as needed to allow truck crossings, and keep open runoff in South Salt Wash.

107.5 Soils are immature, mainly weathered gypsum rock and residual silt and clay from siltstones. Colluvium within the resource and proposed disturbed boundaries is minimal. The upper foot on two of stripping is temporarily stockpiled for the purpose of retaining the indigenous seed bank, and will be replaced in the mined out quarry above backfilled overburden.

107.6 Concurrent reclamation is planned for the quarrying operation. Once the quarrying methods and area is established it will be possible to backfill and to reclaim in concurrently with the operation. Since the quarrying will be on a stratigraphic terrace above existing drainages and gullies there is no need for temporary stabilization of overburden or top soil piles.

Once a quarry area is "mined out" then it may be reclaimed if it is outside the next mining activity area. Backfill of overburden, replacing topsoil, recontouring and reseeding may timely follow quarrying of the gypsum rock resource. The maximum disturbed acreage at any time may not exceed (5) five acres.

R647-4-109 Impact Assessment:

109.1 There are no groundwater systems in the gypsum sequence of the Jurassic Carmel Formation in the South Salt Wash area of the T.22S., R.9E.

The road crossing of South Salt Wash is constructed of rock material derived from the local adjacent area. The lithologies are compatible with the present sediment load in the

drainage. The channel sediment load is silty lime mud derived by a 1990 cloudburst flood from the I-70 quarry site, 2 miles east.

Any locally derived sediment of gypsiferous and/or silty soil from the quarrying operation that washes into the South Salt Wash sediment load would be a reversal of this 1990 environmental change.

The installed culverts will handle the seasonal intermittent flow observed in South Salt Wash. There is no environmental impact caused by this road crossing.

109.2 Impact to threatened & endangered wildlife/habitat:
Seldom have native mammal or reptilian animal species been observed in ten years on the undisturbed gypsiferous outcrops of the B and J claims between the Moore Road and I-70. There are many species of ground dwelling animals on the silty limestones to the East beneath the juniper trees. Active gopher holes are rarely present in the joints of the gypsum rock outcrops and these areas may also have larger predatory badger holes.

Once the quarrying commences, then a different opportunist ecological niche is established. Temporary attractive habitat for animals is established by the presence of water in the quarry. Pollinating insects, birds, reptiles, and small mammals are abundantly present during the quarrying operation. After reclamation, there are again no animals. This observation is a good reason for leaving the quarry(s) as closed catchment basins. There are also rare, transitory, large mammals in the general area, such as mule deer, antelope, coyotes, mountain lion.

109.4 There are no anticipated erosional impacts in Area C. The drainages and gullies are all "dead headed" without basins for accelerating flash floods. Only a 1:10 year cloudburst directly on Area C, will erode stockpiles. The stockpile material is a compatible component with the South Salt Wash bed load.

R647-4-110 - Reclamation Plan:

110.1 Grazing is the only multiple use since the 1960's. In the late 1950's and early 1960's non-permitted "wildcat" oil and gas wells were drilled north and south of the Moore Road. Roads to the well sites give excellent access south between the Moore Road and the I-70 interstate and north to Eagle Canyon across the SID and CHAR unpatented Placer mining claims.

Grazing will continue to be the main activity after quarrying of the gypsum.

110.2 The area C, after quarrying will have a rolling 5% to 7% northwest slope. Furrows parallel with the contours with concentrate water to prevent rill wash and gullying. There will be no high walls, steep slopes, or pits left on the property. Existing natural channels have upstream terminations and small collection areas, so these may be recontoured to blend into the new quarry elevations.

110.3 Mine Road- Crossing South Salt Wash

The crossing of South Salt Wash with culverts may be moved and adjusted to satisfy the efficient loading of gypsum from the quarries in Area C. A final site crossing position will be chosen after Area C is exhausted. This ultimate crossing will access a new road segment capable of truck haulage of the gypsum resource from farther south. This road will connect with the existing "ridge road" toward I-70, and the "wildcat" well sites.

This new access route will be the mine haulage road for the next 10 to 20 years; and allow abandonment of the existing steep, non-truck access road and stream bed South Salt Wash crossing. See, 1:6,000 scale map of existing steep road through B and J Nos. 9 and 10. See, proposed direct, gentle grade route through B and J Nos. 6 and SSW No. 2.

The final disposition of the mine road will be negotiated with Emery County, after the gypsum rock resource is depleted. The abandonment of the steep existing road and its reclamation may be possible in the next 10 years, if all parties agree.

110.5 Revegetation Planting Program.

A major effort will be made to stockpile the topsoil. The topsoils will be mixed when replaced to preserve the native seed bank within the soil, and avoid mono-mineralogical gypsum surfaces. Annual "dry land pasture" seed mixes will be used to stabilize stockpiles topsoils and on newly reclaimed and recontoured areas after quarrying. This practice will enhance the grazing recover, stabilized the surface, provide cover for generation of the native perennial plants. Selective transplanting and reseeding of native plants will be determined as warranted.

R647-4-111 Reclamation Practices:

The reclamation will follow quarrying in 3 to 5 acre increments. Overburden will be recontoured to be compatible with the new quarry elevations. Mixed top soil will be replaced as a thin veneer over the entire area, then reseeded.

R647-4-112 Variance:

A variance is requested for (110.3) the South Salt Wash Drainage Crossing. There is no possible adverse impart to this drainage because the 1990 cloudburst deposited a foreign bedload of silty carbonate from the I-70 materials quarry and completely changed the riparian environment. There has not been another cloudburst of that magnitude. The truck crossing will be maintained, culverts cleared, and access open as long as the quarrying continues. At the termination of quarrying, the crossing will be either removed or turned over to the responsibility of Emery County.

A variance is requested for (110.5) revegetation. Annual dry land pasture seed mix will be used to stabilized stockpiles of topsoil and as the first seed application on newly reclaimed and recontoured areas. This will allow the perennial native seed bank within the topsoil to germinate. A decision of replanting or transplanting native plants will be determined after one year after topsoil replacement. It has been observed in practice that the seed bank in the topsoil is the most effective replacement for native plants.

R647-4-113- Surety, Insurance, Safety:

Diamond K Gypsum, Phillip Palmer DBA, will carry a surety bond or have a security deposit in a dollar amount necessary to cover the surface restoration of the San Rafael mining operation. The surety will be a sufficient amount to recontour and reclaim the maximum disturbance of the mining operation at any one time.

Diamond K Gypsum Inc., Phillip Palmer DBA, will carry liability insurance in the amount of $1,000,000 (one million dollars) for any and all activities in the gypsum rock quarry operations in Sec. 29, T.22S., R.9E., approximately 2 miles northwest of the intersection of the Moore Road, Emery County Route #1612, and Interstate I-70 in the U.S. BLM San Rafael Resource Area, Utah.

John Elliott Welsh, Sr., LLC, John Elliott Welsh, Sr. DBA 4780 Bonair Street, Salt Lake City, Utah 84117-5319 will be listed as an insured certificate liability holder for this policy.

All appropriate mine safety procedures, practices, personal gear will be used by employees, visitors, and all other that enter the mine property. Visitors and all others will sign a liability release. Trespassers will be told to exit.

The Gypsum quarries have specific high intensity surface light reflectivity. This high light intensity requires dark safety glasses and sunscreen for persons within the quarry.

R647-4-116 Public Notice & Appeals:

No requirement for this operation.